

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

<b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)	Application Number	09/824,552	
	Filing Date	April 2, 2001	
	First Named Inventor	In Suk Han	
	Group Art Unit	1623	
	Examiner Name		
Total Number of Pages in This Submission		Attorney Docket No.	1527.MBIO.NP

**ENCLOSURES (check all that apply)**

<input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Appeal Communication: <input type="checkbox"/> Appeal Notice <input type="checkbox"/> Appeal Brief <input type="checkbox"/> Reply Brief <input type="checkbox"/> Assignment with Cover Sheet <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Check in the amount of \$____ <input type="checkbox"/> Declaration Claiming Small Entity Status for: <input type="checkbox"/> Independent Inventor <input type="checkbox"/> Small Business Concern <input type="checkbox"/> Non-Profit Organization <input type="checkbox"/> Declaration & Power of Attorney <input type="checkbox"/> Drawings ____ sheets <input type="checkbox"/> Formal <input type="checkbox"/> Informal	<input type="checkbox"/> Extension of Time Request ____ month <input type="checkbox"/> Fee Calculation Table <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> § 1.97 (1) <input type="checkbox"/> § 1.97 (2) <input type="checkbox"/> § 1.97 (3) <input checked="" type="checkbox"/> Form 1449 <input checked="" type="checkbox"/> Copies of IDS References <input type="checkbox"/> Issue Fee Transmittal & Advance Order	<input type="checkbox"/> Maintenance Fee Transmittal ____ year <input type="checkbox"/> Missing Parts Response <input type="checkbox"/> Notification of Change of Attorney Address & Docket Number <input checked="" type="checkbox"/> Return Postcard <input type="checkbox"/> Revocation & Power of Attorney <input type="checkbox"/> Status Inquiry <input type="checkbox"/> Other:
<b>Remarks</b>		

**SIGNATURE OF APPLICANT, ATTORNEY OR AGENT**

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Signature		Date	7-17-01
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Typed or Printed Name	Randall B. Bateman		
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PATENT APPLICATION  
DOCKET NO. 1527.MBIO.NP

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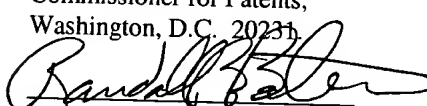
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: In Suk Han  
SERIAL NO.: 09/824,552  
FILED: April 2, 2001  
FOR: METHODS AND  
COMPOSITIONS FOR USE OF  
CATALASE IN HYDROGELS  
AND BIOSENSORS  
ART UNIT: 1623  
EXAMINER:  
DOCKET NO.: 1527.MBIO.NP

CERTIFICATE OF DEPOSIT  
UNDER 37 C.F.R. § 1.8

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Randall B. Bateman

7-17-01  
Date of Deposit

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). Applicant respectfully submits that this Information Disclosure Statement is filed pursuant to 37 C.F.R. § 1.97 (b), within three months of the filing date of the application, within three months of the date of entry of the national stage set forth in § 1.491 in an international application or before the mailing date of a first Office action on the merits and requests that the references cited in the enclosed form PTO-1449 be made of record in the above-

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July 17, 2001  
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captioned application. While no representation is made that any of these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed list of references is disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the references listed, together with any other references which may have been previously submitted or listed, are the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

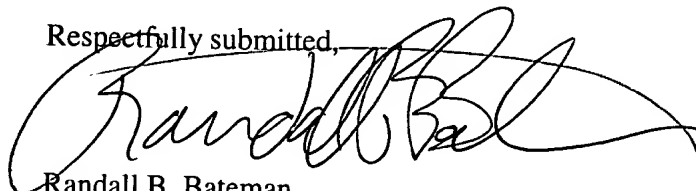
In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each listed reference (or relevant portion thereof) which was not previously submitted to, or cited by, the Patent Office is also enclosed.

Since all listed references are either in the English language or are accompanied by a translation into English, no concise explanation of relevance is required under 37 C.F.R. § 1.98(a)(3).

Please charge any additional fees or credit any overpayment to Deposit Account No. 50-0881.

DATED this 17 day of July, 2001.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Randall B. Bateman", written over a horizontal line.

Randall B. Bateman  
Attorney for Applicant  
Registration No. 37,774

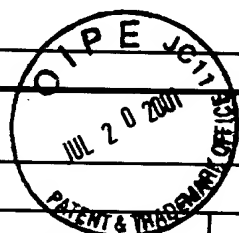
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## LIST OF PRIOR ART CITED BY APPLICANT

Application Number	09/824,552
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Examiner Name	
Attorney Docket	1527.MBIO.NP

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## U.S. PATENT DOCUMENTS

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA	5,141,873	Aug. 25, 1992	Steudle, et al.			
AB	5,665,065	Sept. 9, 1997	Colman, Fredric			
AC	5,967,975	Oct. 19, 1999	Ridgeway, Donald G.			
AD	6,102,856	Aug. 15, 2000	Groff, Clarence			
AE	6,113,539	Sept. 5, 2000	Ridenour, Ken			
AF	6,150,942	Nov. 21, 2000	O'Brien			

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
Ag					

## OTHER PRIOR ART (Including Author, Title, Pertinent Pages, Etc.)

AH	ALBIN, G.W., "Theoretical and Experimental Studies of Glucose Sensitive Membranes," J. Controlled Release, 1987, pg. 267-291, vol. 6.
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AJ	BOUIN, J.C., "Relative Efficiencies of a Soluble and Immobilized Two-Enzyme System of Glucose Oxidase and Catalase,," Biochim. Biophys. Acta, 1976, pg. 23-36, vol. 438.
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AL	BRONSTED, H., Polyelectrolyte Gels: Properties, Preparation and Application, Am. Chem. Soc., 1992, pg. 285-305, Washington, D.C.
AM	CHRISTAKIS, O.M., "On the Mechanism of Immobilized Glucose Oxidase Deactivation by Hydrogel Peroxide," Biotechnol. Bioengin., 1982, pg. 2419-2439, vol. 21.
AN	GHANDEHARI, H., "Biodegradable and pH Sensitive Hydrogels: Synthesis by a Polymer-Polymer Reaction," J. Macrol. Chem. Phys., 1996, pg. 197-980. Vol. 197.
AO	GOUGH, D.A. and LUCISANO, "Transient Response of the Two-Dimensional Glucose Sensor," J., Anal. Chem., 1998, pg. 1272-1281, vol. 60.
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AR	GOUGH, D.A., "Progress Toward a Potentially Implantable, Enzyme-Based Glucose Sensor," Diabetes Care, 1982, pg. 190-198, vol. 5.
AS	ISHIHARA, L., "Glucose Induced Permeation Control of Insulin through a Complex Membrane Consisting of Immobilized Glucose Oxidase and Poly(amino)," Polym. J., 1984, pg. 625-631, vol. 16.
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AV	JUNG, D.Y., "Catalase Effects on Glucose-Sensitive Hydrogels," Macrol., 2000, pg. 3332-3336, vol. 9.
AW	KIM, S. W., "Hydrogels: Swelling, Drug Loading, and Release," Pharm. Res., 1992, pg. 283-290, vol. 9.

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Attorney Docket	1527.MBIO.NP

Sheet 2 of 2

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BA		OWUSU, R.K., "Flow Microcalorimetric Study of Immobilized Enzyme Kinetics Using the Co-Immobilized Glucose Oxidase-Catalase System," <i>Biochim. Biophys. Acta</i> , 1986, pg. 83-91, vol. 872.
BB		PHILIPPOVA, O., "pH-Responsive Gels of Hydrophobically Modified Poly(acrylic acid)," <i>Macrol.</i> , 1997, pg. 8278-8285, vol. 30.
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BK		WASSERMAN, B.P., "High-Yield Method for Immobilization of Enzymes," <i>Biotechnol Bioeng.</i> , 1980, pg. 271-287, vol. 22.
BL		WILKINS, E.S., "Towards Implantable Glucose Sensors: A Review," <i>J. Biomed. Eng.</i> , 1989, pg. 354-361, vol. 11.
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BN		
BO		

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.